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Imaging Unit

Field of invention

The invention relates to an imaging unit in a printing press.

Background ~~of invention~~

A printing press with a printing unit having a seamless image cylinder, which is coated with a dryable polymer by a direct image creation process in the printing unit is known from ~~DE~~German patent No. 19612927 A1.

The surface characteristic of the dryable polymer on the image cylinder is ~~converted~~ completely converted or only in certain areas by a selective laser exposure after drying ~~in order~~ to changes its affinity ~~for~~to a printing ink. ~~The image cylinder is used instead of the plate cylinder i~~In a conventional printing press either in wet offset printing or in dry-offset printing the image cylinder is used instead of the plate cylinder. The image cylinder is cleaned of the image carrying layer after the printing. This layer must not be totally removed ~~totally~~.

The laser source, the coating unit and the drying unit are mounted side by side on a spindle drive. They are moved according to the ~~spindle~~ rotation of the spindle over the width of the cylindrical imaging surface. The cleaning unit is ~~allocated~~ separately allocated.

The lacking of complexity of the apparatus and necessary unproductive time during reversing of the spindle drive ~~is~~represent disadvantage~~ous~~.

Summary description of invention

~~Task~~It is an object of the invention ~~is~~ to provide a compact imaging unit with a short operating time.

~~The task~~That object is solved according to the present invention by allocating the coating unit, the image creation unit and the developing unit together one below the other in a traversing imaging unit.

Brief description of the drawing

The invention is described below in greater detail by an embodiment thereof and by reference to the drawing, wherein the sole Figure 1 shows the imaging unit.

Detailed description

~~Figure~~Fig. 1 shows a printing form cylinder 1 with an imaging unit 2. The imaging unit 2 contains a cleaning unit 3, preferably using laser but possibly also working with an abrasive, a coating unit 4 located below the cleaning unit 3, an image ~~creation~~creating unit 5 located below the coating unit 4, and a developing unit 6 located below the image ~~creation~~creating unit 5.

The operation of the four ~~afore mentioned~~aforementioned units is known and is therefore described only briefly. The image layer of the preceding printing job is removed from the printing form cylinder 1 by the cleaning unit 3. The coating unit 4 applies a new layer for taking the image to the printing form cylinder 1 by spraying or splashing. The image ~~creation~~creating unit 5 is creating the image on this applied layer and with it creating the printing form for the new printing job.

The coating unit 4 and the image creation unit 5 are combined in a combination unit, which operates in this case on the ink jet principle.

The image ~~creation~~creating unit 6 re-works the image carrying layer for instance by hardening and/or cleansing, etc.

The image unit 2 is mounted on a ~~not shown~~ spindle carriage (not shown) and traverses over the width of the printing form cylinder 1 in the direction of the arrow.

The combined allocation of the cleaning unit 3, the coating unit 4, the image ~~creation~~creating unit 5 and the developing unit 6 in the imaging unit 2 permits an overlapping of the operating times of the different units. No reverse movement without active operation to the other side of the printing form cylinder is necessary.